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Serial No. 10/631,193
60246-225
PA057.10129-USIN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant: Randall, et al.
Serial No.: 10/631,193
Filed: July 31, 2003
Group Art Unit: 3637
Examiner: Mai, Lanna
Title: SNAP-IN PANEL DESIGN FOR A REFRIGERATION COOLER

APPEAL BRIEF

Mail Stop - Appeal Brief
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Subsequent to the filing of the Notice of Appeal on February 6, 2007 Appellant hereby submits its brief. The Commissioner is authorized to charge Deposit Account No. 03-0835 in the name of Carrier Corporation in the amount of \$500.00. The Commissioner is authorized to charge Deposit Account No. 03-0835 in the name of Carrier Corporation for any additional fees or credit the account for any overpayment.

REAL PARTY IN INTEREST

Carrier Commercial Refrigeration Corporation is the real party in interest of the present application. An assignment of all rights in the present application to Carrier Commercial Refrigeration Corporation was executed by the inventors and recorded by the U.S. Patent and Trademark Office at Reel 014361, Frame 0097.

RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences related to the present application of which the Appellants are aware.

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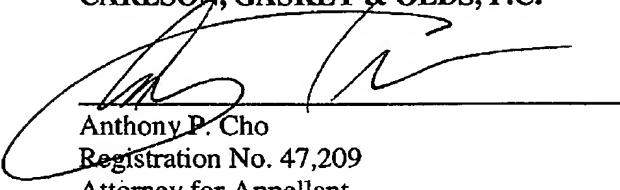
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CONCLUSION

For these reasons, the final rejection of Claims 1, 9, 10, 13-20 and 22 is improper and should be withdrawn.

Respectfully Submitted,

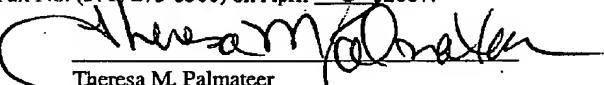
CARLSON, GASKEY & OLDS, P.C.


Anthony P. Cho
Registration No. 47,209
Attorney for Appellant
400 West Maple Road, Suite 350
Birmingham, Michigan 48009
(248) 988-8360

Dated: April 6, 2007

CERTIFICATE OF FACSIMILE

I hereby certify that this Appeal Brief relative to Application Serial No. 10/631,193, is being facsimile transmitted to the Patent and Trademark Office (Fax No. (571) 273-8300) on April 6, 2007.


Theresa M. Palmateer

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STATUS OF CLAIMS

Claims 1, 9, 10, 13-20 and 22, which are presented in the Appendix, stand finally rejected. Claims 10 and 19 are objected to as dependent upon a rejected base claim, but are allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Appellants hereby appeal the final rejection of Claims 1, 9, 10, 13-20 and 22.

STATUS OF AMENDMENTS

All amendments have been entered.

SUMMARY OF CLAIMED SUBJECT MATTER

With reference to Figure 1, the present invention relates generally to an insulated refrigeration panel assembly 10. Claim 1 sets forth that the insulated refrigeration panel assembly 10 has both a first skin 24 and a second skin 28, which is generally parallel to the first skin 24. (See Paragraph 24 and Figure 1). The insulating body 32 is sandwiched between the two skins 24, 28, forming first panel unit 20. The first flexible snap fit connector 36 of the first panel unit 20 is arranged to engage a first mating connector 40 along a first direction V, say a vertical direction. In addition, a second flexible snap fit connector 44 of the first panel unit 20 is arranged to engage a second mating connector 48 along a second direction H, say a horizontal direction. Direction V is transverse to direction H. The first flexible snap fit connector 36 and the second flexible snap fit connector 48 are made from at least one of the first skin 24, the second skin 28, and the first insulating body 32.

Claim 9 depends upon Claim 1 and requires that direction V is vertical and direction H is horizontal.

Claim 10 also depends upon Claim 1. As shown in Figure 7, this claim describes a first panel unit 152 having two bodies: first body 156 and second body 160. The first body 156 is separable from the second body 160. Further, each body 156, 160 define a part of the first flexible snap fit connector 166. (Paragraph 32).

Claim 13 describes an insulated refrigeration panel assembly 10 having three panel units: a first panel unit 20, a second panel unit 80 and a third panel unit 120. (See Paragraph 24 and

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Figure 1). The first panel unit 20 has a first skin 24 and a second skin 28 spaced generally parallel to the first skin 24. A first insulating body 32 is sandwiched between skins 24, 28.

A second panel unit 80 has a third skin 84 and a fourth skin 88. (See Paragraph 26). The third skin 84 is generally parallel to the fourth skin 88. A second insulating body 92 is sandwiched between skins 84, 88.

The third panel unit 120 also has two skins: fifth skin 124 and sixth skin 128. (See Paragraph 27). The fifth skin 124 and sixth skin 128 are generally parallel and sandwich a third insulating body 132. The first panel unit 20 has a first flexible snap fit connector 36 while the second panel unit 60 has a first mating connector 40. The first flexible snap fit connector 36 engages the first mating connector 40 along a first direction. The first panel unit 20 also has a second flexible snap fit connector 44 for engaging a second mating connector 48 of the third panel unit 120. The second flexible snap fit connector 44 engages the second mating connector 48 along a second direction transverse to the first direction.

Claim 14 depends upon Claim 13. Claim 14 requires that the first flexible snap fit connector 36 and the second flexible snap fit connector 44 be made from one of the first skin 24, the second skin 28, or the first insulating body 32.

Claim 15 depends upon Claim 14. Claim 15 requires the second mating connector 48 to be made from the fifth skin 124, the sixth skin 128, or the third insulating body 132.

Claim 16 depends upon Claim 13. Claim 16 states that the second insulating body has a first end portion 56 and a second end portion 60. The first end portion 56 is the first mating connector and the second end portion is a third mating connector. (Paragraph 30 and Figure 5).

Claim 18 depends upon Claim 13 and requires the first direction, V, is vertical. Further, the second direction is horizontal, H.

Claim 19 describes the invention such that the first panel unit comprises a first body and a second body, said first body defining a first part of said first flexible snap fit connector and said second body defining a second part of said first flexible snap fit connector.

Claim 17 is independent. With reference to Figure 5, this claim describes an insulated refrigeration panel assembly 10. There are three panel units 32, 92 and 148 – each having two skins sandwiching an insulating body. The first panel unit 148 has a first snap fit connector and a second snap fit connector. In addition, the second panel unit has a first mating connector that

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engages the first snap fit connector of the first panel unit 148 along a first direction, V. The third panel unit 92 has a second mating connector for engaging the second snap fit connector along a second direction transverse to said first direction. The first panel unit and the second panel unit form a seam, which is covered by a curved flange supported by the first panel unit.

With respect to Claim 20, an insulating body 32 is arranged next to skin 24 and extends generally parallel to skin 24 along axis X. (See Paragraph 24 and Figure 1). A flexible snap fit connector 36 is arranged to engage a mating connector along an axis Y, an axis transverse to axis X. The skin 24 and the insulating body 32 make up the snap fit connector 36.

In addition, claim 22, which depends upon claim 20, sets forth that the insulating body 32 comprises a foam.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

- A. Are Claims 1 and 9 properly rejected under 35 U.S.C. 103(a) as being obvious over Montes (U.S. Patent No. 6,122,879) in view of DeWitt. (U.S. Patent No. 5,418,028)?
- B. Are Claims 1, 9, 13-16 and 18 properly rejected under 35 U.S.C. 103(a) as being obvious over DeWitt. (U.S. Patent No. 5,418,028) in view of Montes (U.S. Patent No. 6,122,879)?
- C. Is Claim 17 properly rejected under 35 U.S.C. 103(a) as being obvious over DeWitt (U.S. Patent No. 5,418,028) in view of Montes (U.S. Patent No. 6,122,879) and Andersson (U.S. Patent No. 5,381,638)?
- D. Are Claims 1, 9 and 20 properly rejected under 35 U.S.C. 103(a) as being obvious over Montes (U.S. Patent No. 6,122,879) in view of Edgar. (U.S. Patent No. 3,236,014)?
- E. Is Claim 22 properly rejected under 35 U.S.C. 103(a) as being obvious over Montes (U.S. Patent No. 6,122,879) in view of Edgar. (U.S. Patent No. 3,236,014) and further in view of DeWitt. (U.S. Patent No. 5,418,028)?

ARGUMENTS

- A. **The rejection of Claims 1 and 9 under 35 U.S.C. 103(a) is improper.**

The Examiner rejected Claims 1 and 9 under 35 U.S.C. §103(a) as being unpatentable over *Montes* in view of *DeWitt*. The Examiner recognized that *Montes* fails to teach two flexible

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snap-fit connectors each connecting mating connectors in a direction transverse to each other. [Non-Final Office Action (6-13-06), p.2]. Instead, the Examiner contends that this missing feature is shown by *DeWitt*. However, combining the two references would still fail to show “a first flexible snap fit connector arranged to engage a first mating connector along a first direction” as well as “a second flexible snap fit connector arranged to engage a second mating connector along a second direction transverse to said first direction” as required by Claim 1 and its dependent Claim 9. Nowhere in the prior art cited are there two such snap-fit connectors on a panel unit arranged to engage mating connectors along different directions. Accordingly, the cited combination fails to show all the limitations of Claims 1 and 9.

Additionally, even assuming that the combination of references taught each of the limitations of Claims 1 and 9, there is no motivation to make the combination. The Examiner contends that one of ordinary skill in the art would want to increase the ways in which the panels can be attached to other panels to form a structure. [Non-Final Office Action (6-13-06), page 2]. The Examiner cites *DeWitt* as support for this motivation, arguing that “it is general knowledge to one having ordinary skill in the art to have multiple protruding connecting members on the same panel which are also perpendicular to each other to provide panels that can be attached to adjacent panels in a manner to form a structure (see Fig 1).” [Final Office Action (11-21-06), page 5]. However, while the prior art teaches two connections transverse to one another generally, there is nothing in the prior art that indicates that both connections are snap-fit connections. Instead, the Examiner assumes so when it is also possible that one connection could be snap-fit and the other an ordinary connection. Therefore, there is no motivation or suggestion that snap-fit connectors be used in two-different directions on a panel.

Indeed, *DeWitt* stresses the importance of a good interlock between connecting panels and teaches that the connection be latched. [See *DeWitt*, column 1, ll. 36-40, col. 2, ll. 37-39]. Such a tight connection may not be afforded by the springy connection of *Montes*. Accordingly, *DeWitt* teaches away from its combination with *Montes*.

Moreover, *DeWitt* states as follows:

Heretofore, cooler panels were typically formed of foam polystyrene blocks that were encased within aluminum casings. The foam polystyrene provided good thermal insulation while the aluminum casing provided the structural support and impact resistance necessary for the panels to function as wall elements. According to the present invention the need for aluminum or other metal type cases has been eliminated. Instead,

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an integral plastic cooler panel is provided that possesses sound structural and thermal insulating qualities that may be interconnected to form cooler walls.

[*DeWitt*, column 2, ll. 58-68]. *DeWitt* therefore teaches away from the use of metal cases – the precise casing used by *Montes* for its resilient connection. Accordingly, combining *DeWitt* with the metal resilient connection of *Montes* would defeat an object of *DeWitt*, the elimination of metal cases.

Furthermore, it is precisely the metal skin taught away by *DeWitt*, which is required for the resilient connection of *Montes* as shown in Figure 1 of *Montes*. Thus, *DeWitt* also teaches away from its combination with *Montes* because *DeWitt* teaches against the use of a metal skin that forms the resilient connection of *Montes*. Accordingly, Claims 1 and 9 are allowable over *Montes* in view of *DeWitt*.

B. The rejection of Claims 1, 9, 13-16 and 18 under 35 U.S.C. 103(a) is improper.

The Examiner further rejected Claims 1, 9, 13-16 and 18 under 35 U.S.C. §103(a) as being unpatentable over *DeWitt* in view of *Montes*. Again, the combination of references does not teach two snap-fit connectors receiving mating connectors in two different directions. The combination of references fails to teach all of the limitations of Claims 1, 9, 13-16 and 18. Therefore, these claims are allowable.

There is also no motivation or suggestion to replace the connectors described by *DeWitt* with the snap-fit connectors of *Montes*. To address this deficiency in the combination, the Examiner claims that the flexible snap-fit connector of *Montes* is functionally equivalent to the tongue-in-groove connector of *DeWitt* and that either type of connector would work equally well between the panels of *DeWitt*. [Final Office Action (11-21-06), page 5]. Yet, the Examiner offers no proof of this assertion. There is no indication that the springy connection of *Montes* would be just as functionally equivalent as the latched tongue-in-groove connection of *DeWitt*. Even if the different types of connection were functionally equivalent, there would still be no reason to change the type of connection taught by *DeWitt* for the snap-fit connection of *Montes*.

The Examiner also states without basis that the springy snap-fit connector of *Montes* would provide a more secure attachment for *DeWitt*. Again, however, there is no such proof of such a benefit. Indeed, one could also equally imagine that the resilient snap-fit connection

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between panels could be less secure than the latched tongue-in-groove connection described by *DeWitt*. At the end of the day, there is no reason why one of ordinary skill in the art would forego the connection described by *DeWitt* for the connection described by *Montes*, especially in view of the importance *DeWitt* places on structural integrity.

Further, using the metal flexible snap-fit connectors of *Montes* runs contrary to an object of *DeWitt* (i.e., elimination of the need for aluminum or other metal type case as expressly stated by *DeWitt*). [*DeWitt*, column 2, ll. 63-65]. Simply put, *DeWitt* teaches away from its combination with *Montes*. Therefore, Claims 1, 9, 13-16 and 18 are in condition for allowance.

C. The rejection of Claim 17 under 35 U.S.C. 103(a) is improper.

The Examiner rejected claim 17 under 35 U.S.C. §103(a) as being unpatentable over *DeWitt* in view of *Montes* and *Anderson*. For the same reasons that the combination of *DeWitt* in view of *Montes* is improper as stated above, it is equally improper in the rejection of claim 17. Therefore, claim 17 is in condition for allowance.

D. The rejection of Claims 1, 9 and 20 under 35 U.S.C. 103(a) is improper.

The Examiner also rejected Claims 1, 9 and 20 under 35 U.S.C. 103(a) as being unpatentable over *Montes* in view of *Edgar*. Again, the combination of references fails to teach all of the limitations of Claims 1, 9 and 20. With respect to Claims 1 and 9, there is no teaching of "a first flexible snap fit connector arranged to engage a first mating connector along a first direction" as well as "a second flexible snap fit connector arranged to engage a second mating connector along a second direction transverse to said first direction." As to Claim 20, there is no teaching of "a flexible snap fit connector" arranged to engage a mating connector along a direction transverse to the direction of extension of the insulating body. Therefore, these claims are in condition for allowance.

Even assuming that all of the limitations are taught by the combination of references, there is no motivation to modify *Montes* with *Edgar*. As a preliminary matter, *Edgar* deals with constructing a building, such as a shelter, hut, a camp and other structures normally made primarily from wood. [*Edgar*, column 1, ll. 9-11]. *Edgar* is not even remotely related to the construction of a refrigeration cooler and is non-analogous art.

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Furthermore, the motivation proffered by the Examiner is unsupported. There is nothing within *Edgar* that even suggests or provides motivation for its combination with *Montes*. As to Claims 1 and 9, there is no reason to make two snap-fit connectors of *Montes* operate in two different directions. Again, panels may be so construed as to have one snap-fit connector in one direction and a different type of connector operate in another direction. There is no motivation in either reference to make both connections snap-fit in two different directions. With respect to Claim 20, there is also no motivation to make a snap-fit connector engageable to a mating connector along a direction transverse to the direction of extension of the insulating body.

Furthermore, *Edgar* teaches away from its combination with a snap-fit connector because *Edgar* employs nails or screws to connect the panels together, which are consistent with a wood structure. [*Edgar*, column 3, ll. 70-72]. Accordingly, the rejection of *Montes* in view of *Edgar* is improper. Claims 1, 9 and 20 are therefore in condition for allowance.

E. The rejection of claim 22 under 35 U.S.C. 103(a) is improper.

The Examiner further rejected claim 22 under 35 U.S.C. §103(a) as being unpatentable over *Montes* in view of *Edgar* as applied to claims 1, 9 and 20 and further in view of *DeWitt*. The combination of these references is deficient for the very same reasons stated above. Accordingly, claim 22 is allowable over these cited references.

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CLAIM APPENDIX

1. An insulated refrigeration panel assembly comprising:
 - a first skin;
 - a second skin spaced generally parallel to said first skin;
 - a first insulating body sandwiched between said first skin and said second skin, said first skin, said second skin and said first insulating body forming a first panel unit;
 - a first flexible snap fit connector arranged to engage a first mating connector along a first direction, said first flexible snap fit connector attached to said first panel unit; and
 - a second flexible snap fit connector arranged to engage a second mating connector along a second direction transverse to said first direction, said second flexible snap fit connector attached to said first panel unit wherein said first flexible snap fit connector and said second flexible snap fit connector comprise at least one of said first skin, said second skin, and said first insulating body.
9. The insulated refrigeration panel assembly of Claim 1 wherein said first direction is a vertical direction and said second direction is a horizontal direction.
10. The insulated refrigeration panel assembly of Claim 1 wherein said first panel unit comprises a first body and a second body, said first body defining a first part of said first flexible snap fit connector and said second body defining a second part of said first flexible snap fit connector, said first body separable from said second body.

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13. An insulated refrigeration panel assembly, comprising:
 - a first panel unit comprising a first skin, a second skin spaced generally parallel to said first skin, and a first insulating body sandwiched between said first skin and said second skin;
 - a second panel unit comprising a third skin, a fourth skin spaced generally parallel to said third skin and a second insulating body sandwiched between said third skin and said fourth skin;
 - a third panel unit comprising a fifth skin, a sixth skin spaced generally parallel to said fifth skin and a third insulating body sandwiched between said fifth skin and said sixth skin;

wherein said first panel unit comprises a first flexible snap fit connector and said second panel unit comprises a first mating connector, said first flexible snap fit connector engaging said first mating connector along a first direction; and

wherein said first panel unit comprises a second flexible snap fit connector and said third panel unit comprises a second mating connector, said second flexible snap fit connector engaging said second mating connector along a second direction transverse to said first direction.
14. The insulated refrigeration panel assembly of Claim 13 wherein said first flexible snap fit connector and said second flexible snap fit connector comprise at least one of said first skin, said second skin, and said first insulating body.
15. The insulated refrigeration panel assembly of Claim 14 wherein said second mating connector comprises at least one of said fifth skin, said sixth skin, and said third insulating body.

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16. The insulated refrigeration panel assembly of Claim 13 wherein said second insulating body has a first end portion and a second end portion, said first end portion comprising said first mating connector and said second end portion comprising a third mating connector.

17. An insulated refrigeration panel assembly, comprising:

a first panel unit comprising a first skin, a second skin spaced generally parallel to said first skin, and a first insulating body sandwiched between said first skin and said second skin;

a second panel unit comprising a third skin, a fourth skin spaced generally parallel to said third skin and a second insulating body sandwiched between said third skin and said fourth skin;

a third panel unit comprising a fifth skin, a sixth skin spaced generally parallel to said fifth skin and a third insulating body sandwiched between said fifth skin and said sixth skin;

wherein said first panel unit comprises a first snap fit connector and said second panel unit comprises a first mating connector, said first snap fit connector for flexibly engaging said first mating connector along a first direction;

wherein said first panel unit comprises a second snap fit connector and said third panel unit comprises a second mating connector, said second snap fit connector for flexibly engaging said second mating connector along a second direction transverse to said first direction ;and

wherein said first panel unit and said second panel unit form a seam, said seam covered by a curved flange supported by said first panel unit.

18. The insulated refrigeration panel assembly of Claim 13 wherein said first direction is a vertical direction and said second direction is a horizontal direction.

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19. The insulated refrigeration panel assembly of Claim 13 wherein said first panel unit comprises a first body and a second body, said first body defining a first part of said first flexible snap fit connector and said second body defining a second part of said first flexible snap fit connector.
20. An insulated refrigeration panel assembly comprising:
 - at least one skin;
 - an insulating body spaced next to said at least one skin, said insulating body extending generally parallel along a first axis; and
 - a flexible snap fit connector arranged to engage a mating connector along a second axis transverse to said first axis, said snap fit connector comprising said at least one skin and said insulating body.
22. The insulated refrigeration panel assembly of Claim 20 wherein said insulating body comprises a foam.

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EVIDENCE APPENDIX

None.

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RELATED PROCEEDINGS APPENDIX

None.